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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/547,688	02/23/2006	Kenny Chang	BDL-485XX	7107
207 7590 07/01/2009 WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP TEN POST OFFICE SQUARE BOSTON, MA 02109				
EXAMINER PIZIALI, ANDREW T				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
07/01/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/547,688

**Applicant(s)**

CHANG, KENNY

**Examiner**

Andrew T. Piziali

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 23-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 23-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The amendment filed on 4/29/2009 has been entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6, 7, 9, 10, 28, 29, 31 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 6 and 28, the phrase “about 20% to about 80%” renders the claims indefinite because there is nothing in the specification, prosecution history, or the prior art to provide indication as to what range is covered by the term “about.”

Regarding claims 7 and 29, the phrase “an effective thickness of about 1 to about 6 mm” renders the claims indefinite because there is nothing in the specification, prosecution history, or the prior art to provide any indication as to what range is covered by the term “about.”

Regarding claims 9 and 31, the phrase “an effective thickness of about twice the diameter of the wire constituting the wire mesh” renders the claims indefinite because there is nothing in the specification, prosecution history, or the prior art to provide any indication as to what range is covered by the term “about.”

Regarding claims 10 and 32, the phrase “up to about 1400°C” renders the claims indefinite because there is nothing in the specification, prosecution history, or the prior art to provide any indication as to what range is covered by the term “about.”

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10 and 23-32 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 3,958,840 to Hickox.

Hickox discloses an annular shim member having first and second opposing surfaces and a plurality of openings (gas flow paths) formed therethrough, wherein the member is made from a metallic material (see entire document including column 1, lines 52-68 and Figure 3). The shim inherently at least partially defines a plurality of radially extending gas flow paths form communicating a radially interior side of the member with a radially exterior side of the member (Figure 3). Regarding the shim member being substantially planar, although Figure 1 illustrates the finished bearing in non-planar form, Hickox discloses that the layers are molded into said shape by heat and pressure (column 3, lines 4-17). Therefore, the shim member (Figure 3) is in planar form prior to said shape molding.

Regarding claims 2, 4, 5, 24, 26 and 27, the bare metallic material is a refractory metal such as steel (column 1, lines 52-68). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the member from any suitable refractory metallic material, such as stainless steel, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claims 3 and 25, the metallic material is a wire mesh (column 1, lines 52-68).

Regarding claims 6 and 28, the wire mesh has an open area of between 20 and 80% (see Figure 3).

Regarding claims 7 and 29, Hickox does not appear to mention a specific thickness range, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the thickness, such as from about 1 mm to about 6 mm, because it is understood by one of ordinary skill in the art that the layer thicknesses determine properties such as flexibility and weight and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claims 8 and 30, Hickox does not appear to mention preshaping the wires, but absent a showing to the contrary, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are

commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claims 9 and 31, considering that the member is may comprise a weave of interlocking strands (column 1, lines 52-56), it appears to inherently possess the claimed characteristic.

Regarding claims 10 and 32, considering that the member is substantially identical to the claimed member in structure and materials, it appears to be inherently capable of withstanding temperatures of up to about 1400C.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 5, 7, 26, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 3,958,840 to Hickox as applied to claims 1-10 and 23-32 above, and further in view of USPN 4,304,178 to Haberle.

Regarding claims 4, 5, 26 and 27, Hickox does not appear to specifically mention the use of stainless steel, but Haberle discloses that it is known in the art to use stainless steel (see entire document including column 3, lines 54-58 and column 5, lines 10-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the steel member from any suitable steel material, such as stainless steel, because it has been held to

be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claims 7 and 29, Hickox does not appear to specifically mention a member thickness, therefore, it would have been necessary and thus obvious to look to the prior art for conventional thicknesses. Haberle provides this conventional teaching showing that it is known in the art to use a thickness of about 5 mm (column 5, lines 10-13). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the member with a thickness of about 5 mm, motivated by the expectation of successfully practicing the invention of Hickox.

8. Claims 1-10 and 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 3,958,840 to Hickox in view of USPN 3,429,622 to Lee.

Hickox discloses an annular shim member having first and second opposing surfaces and a plurality of openings (gas flow paths) formed therethrough, wherein the member is made from a metallic material (see entire document including column 1, lines 52-68 and Figure 3). The shim inherently at least partially defines a plurality of radially extending gas flow paths form communicating a radially interior side of the member with a radially exterior side of the member (Figure 3).

Although Hickox appears to illustrate a bearing comprising the shim member in non-planar form (Figures 1 and 2), Hickox also discloses that a typical arrangement for a bearing is taught by USPN 3,429,622 to Lee (column 1, lines 15-22). Lee illustrates a bearing wherein the members are substantially planar (see entire document including Figure 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

make the shim member in substantially planar form, motivated by a desire to use the shim member in the bearing arrangement disclosed by Lee.

Regarding claims 2, 4, 5, 24, 26 and 27, the bare metallic material is a refractory metal such as steel (column 1, lines 52-68). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the member from any suitable refractory metallic material, such as stainless steel, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claims 3 and 25, the metallic material is a wire mesh (column 1, lines 52-68).

Regarding claims 6 and 28, the wire mesh has an open area of between 20 and 80% (see Figure 3).

Regarding claims 7 and 29, Hickox does not appear to mention a specific thickness range, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the thickness, such as from about 1 mm to about 6 mm, because it is understood by one of ordinary skill in the art that the layer thicknesses determine properties such as flexibility and weight and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claims 8 and 30, Hickox does not appear to mention preshaping the wires, but absent a showing to the contrary, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of



production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claims 9 and 31, considering that the member is may comprise a weave of interlocking strands (column 1, lines 52-56), it appears to inherently possess the claimed characteristic.

Regarding claims 10 and 32, considering that the member is substantially identical to the claimed member in structure and materials, it appears to be inherently capable of withstanding temperatures of up to about 1400C.

9. Claims 4, 5, 7, 26, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 3,958,840 to Hickox in view of USPN 3,429,622 to Lee as applied to claims 1-10 and 23-32 above, and further in view of USPN 4,304,178 to Haberle.

Regarding claims 4, 5, 26 and 27, Hickox does not appear to specifically mention the use of stainless steel, but Haberle discloses that it is known in the art to use stainless steel (see entire document including column 3, lines 54-58 and column 5, lines 10-13). It would have been

obvious to one having ordinary skill in the art at the time the invention was made to make the steel member from any suitable steel material, such as stainless steel, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claims 7 and 29, Hickox does not appear to specifically mention a member thickness, therefore, it would have been necessary and thus obvious to look to the prior art for conventional thicknesses. Haberle provides this conventional teaching showing that it is known in the art to use a thickness of about 5 mm (column 5, lines 10-13). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the member with a thickness of about 5 mm, motivated by the expectation of successfully practicing the invention of Hickox.

#### ***Response to Arguments***

10. Applicant's arguments filed 4/29/2009 have been considered but are mostly moot in view of the new grounds of rejection.

Regarding the 35 U.S.C. 112 second paragraph rejections the applicant asserts that the "about" limitations are clear and can be readily assessed. The examiner respectfully disagrees. The examiner is unable to locate anything in the specification, prosecution history, or the prior art to provide indication as to what ranges are covered by the "about" limitations. Therefore, said "about" limitations are unclear to the examiner. Considering that the applicant asserts that the limitations are clear the applicant is simply required to disclose the ranges covered by each of the claimed "about" limitations so that the examiner and applicant are each assured that the claims have been fully searched.

For example, does the claimed range of “about 20% to about 80%” include 19.9%, 19.8%, 19.5%, 19%, 18%, 17% and/or 15%? Even if the applicant asserts that the claimed range includes, for example, 18% but not 17% then it is not clear if it includes 17.9%, 17.85%, 17.845% etc. Therefore, considering that the applicant asserts that the “about” limitations are clear the applicant is simply required to disclose the precise ranges covered by said limitations so that the examiner and applicant are each assured that the claims have been fully searched.

The applicant asserts that the shim member disclosed by Hickox lacks gas flow paths. The examiner respectfully disagrees. Hickox discloses an annular shim member having first and second opposing surfaces and a plurality of openings (gas flow paths) formed therethrough, wherein the member is made from a metallic material (see entire document including column 1, lines 52-68 and Figure 3).

Regarding claims 8 and 30, the applicant asserts that Hickox fails to teach or suggest that the shim member wire mesh includes a crimped weave mesh. The examiner respectfully disagrees. The current specification teaches that a crimped weave mesh refers to reshaping the wires in at least one direction in the mesh (page 8, last paragraph). Hickox does not appear to mention reshaping the wires, but absent a showing to the contrary, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir.

1985). The burden has been shifted to the applicant to show an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

#### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew T Piziali/  
Primary Examiner, Art Unit 1794